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US-PAT-NO: 6498982
DOCUMENT-IDENTIFIER: US 6498982 B2

TITLE: Methods and apparatus for displaying a travel route and/or generating a list of places of interest located near the travel route

DATE-ISSUED: December 24, 2002

INVENTOR-INFORMATION:

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APPL-NO: 09/901082   [PALM]
DATE FILED: July 10, 2001

PARENT-CASE:
CROSS-REFERENCE TO RELATED APPLICATIONS This application is a continuation of U.S. Ser. No. 08/069,161, filed May 28, 1993, which is allowed. This application is now an issued patent, U.S. Pat. No. 6,282,489, dated Aug. 28, 2001.

INT-CL-ISSUED: [07] G01 C 21/26

US-CL-ISSUED: 701/202; 701/208, 701/209, 701/201
US-CL-CURRENT: 701/202; 701/201, 701/208, 701/209

FIELD-OF-CLASSIFICATION-SEARCH: 701/200, 701/201, 701/208, 701/209, 701/210, 701/211, 701/202, 340/988, 340/990, 340/995, 340/947, 340/954, 73/178R
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

▒ Search Selected ▒   ▒ Search ALL ▒   ▒ Clear ▒

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐ 4301506	November 1981	Turco	701/117

☐	4528552 ·	July 1985	Moriyama et al.	340/525
☐	4546439	October 1985	Esparza	701/202
☐	4570227	February 1986	Tachi et al.	701/202
☐	4646089	February 1987	Takanabe et al.	340/995
☐	4734863	March 1988	Honey et al.	701/207
☐	4764873	August 1988	Libby	701/301
☐	4796189	January 1989	Nakayama et al.	701/209
☐	4866626	September 1989	Egli	701/207
☐	4876651	October 1989	Dawson et al.	701/200
☐	4890104	December 1989	Takanabe et al.	340/995
☐	4914605	April 1990	Loughmiller, Jr.	345/649
☐	4926336	May 1990	Yamada	701/202
☐	4937753	June 1990	Yamada	701/209
☐	4954958	September 1990	Savage et al.	701/202
☐	4962458	October 1990	Verstraete	701/200
☐	4984168	January 1991	Neukrichner et al.	701/210
☐	5031104	July 1991	Ikeda et al.	701/209
☐	5041983	August 1991	Nakahara et al.	701/209
☐	5067081	November 1991	Person	701/205
☐	5115399	May 1992	Nimura et al.	701/208
☐	5168452	December 1992	Yamada et al.	701/202
☐	5170353	December 1992	Verstraete	701/202
☐	5172321	December 1992	Ghaem et al.	455/456
☐	5189430	February 1993	Yano et al.	342/457
☐	5191406	March 1993	Brandestini et al.	348/111
☐	5191532	March 1993	Moroto et al.	701/201
☐	5231584	July 1993	Nimura et al.	701/202
☐	5270937	December 1993	Link et al.	701/209
☐	5274387	December 1993	Kikihara et al.	340/995
☐	5293163	March 1994	Kakihara et al.	341/995
☐	6084882	July 2000	Ogura et al.	340/2.6
☐	6282489	August 2001	Bellesfield et al.	701/201

OTHER PUBLICATIONS

B. Singh et al.; "Introduction to Data Structures"; pp. 215-223; 1985; West
Publishing of Minnesota.
U.S. Geological Survey Professional Paper; "Map Projections--A Working Manual";
1987; U.S. Department of Interior.

ART-UNIT: 3661

PRIMARY-EXAMINER: Louis-Jacques; Jacques H.

ATTY-AGENT-FIRM: Fish & Richardson P.C.

ABSTRACT:

An automated travel planning apparatus includes three separate databases, including a map database for storing bit-mapped images covering numerous geographic regions, a routing database for storing node, link, and shape data for roads geographically located within the geographic regions and for storing place data indicating the geographic location of places such as towns and cities, and a places of interest database containing the geographic locations of numerous places of interest. A processor within the automated travel planning apparatus may be divided into several functional components, including a map selection component, a routing component, and a place selection component. In response to user input at the user interface, the map selection component chooses a bit-mapped image from the map database for display on the display monitor. After a user selects, via the user interface, a departure point and a destination point, the routing component employs the routing database to generate and display a route between the selected departure and destination points. If the user requests a list of places near the displayed route, the place selection component employs the places of interest database to generate and display a list of places of interest which are within a predetermined distance of the generated route.

14 Claims, 11 Drawing figures

☐ [˙Generate Collection ˙   ] [Print]

L9: Entry 1 of 1   File: USPT   Sep 7, 1999

DOCUMENT-IDENTIFIER: US 5948040 A
TITLE: Travel reservation information and planning system

Detailed Description Text (93):
Integration between a plurality of sequential sub-sessions is feasible. For an
illustration, manual or automated entry of the birthday party location in Places
417, in a preceding step, can facilitate John Jones' later explorations in Accts.
411--for example, shopping for lodging or transportation reservations. The prior
geographic input can also help searching in Times 419 for EOIs or scheduled events
of interest limited to the local geographic area (e.g. a nearby sports or cultural
event John Jones' might want to attend either before or after his grandmother's
birthday party). The alternative stock hypothetical case in this disclosure
provides added examples of integration involving multiple sequential sub-sessions
in TRIPS. After selecting "scuba-diving" related to "coral reefs" in Topics 415,
Sara Smith can prompt and preview a display of TRIPS maps of the locations of
particular "coral reefs." The presentation of maps can further include listings and
location information about a specific collection of scheduled events related to
"scuba diving" (e.g. "located" or geocoded dates/times for particular diving
classes, dive boat sailings, days/hours which particular dive-shops in specified
places are open, seasonal or reservation availability information for particular
scuba-diving related services), which are also pinpointed at specific geographic
locations on the TRIPS display. A map display or series of map screens--integrated
with dates/times and available reservation/ticket information related to the linked
topics of "scuba-diving" and "coral reefs"--is thus presented to Sara Smith for
preview by means of sequential, relational operations performed in the Topics 415,
Places 417, Times 419 and Accts. 411 Subsystems, consistent with the flow chart in
FIG. 4. Added details on such preferred TRIPS sequenced relational database
operations, engaging a plurality of the TRIPS travel information Subsystems, are
provided elsewhere in the present TRIPS disclosure--particularly referring to FIGS.
5-8.

Detailed Description Text (97):
TRIPS travel information gathered by independent user-directed operations gets
incorporated into the travel plan output emerging from the ongoing, individual
TRIPS travel planning session in two general ways. For one thing, the user can
"attach" or manually command that selected numerical, text, graphic and/or audio
travel information items be included in his or her emerging travel plan output--as
disclosed in David M. DeLorme and Keith A. Gray, U.S. Pat. No. 5,559,707 "COMPUTER-
AIDED ROUTING SYSTEM" [or CARS], as assigned to DeLorme Publishing Co., Inc. also
owner of the present TRIPS patent disclosure. Second, TRIPS travel information
gathered during independent user-directed operations is incorporated into emerging
travel plan output by being used as an ingredient or by becoming the basis of a
subsequent integrated operational sequence. John Jones might independently look up
the exact street address of a personal friend in upstate New York or West Virginia,
for example--with the "People" directory in the "INDEX & LISTS" sub-menu under the
"WHAT/WHO?" main input menu at 157 in FIG. 1C, which is the gateway for user
inquires addressing TOPICS 415 in FIG. 4. This independently user-derived topical

travel information--i.e. the street address and name of John Jones' personal friend--can thereafter be "mapped", geocoded or geographically located by means of a subsequent, integrative step performed in the Geographic Subsystem or Places 417 in FIG. 4. The old friend's name and address is thereby located and pointed out on the TRIPS map display, for example, by a symbol and captioning Map Note--as disclosed in Keith A. Gray, U.S. patent application Ser. No. 08/521,828 titled "COMPUTERIZED ADDRESS LOCATION AND COMMUNICATIONS SYSTEM" [or CALCS] filed Aug. 31, 1995 and owned by DeLorme Publishing Co. Inc., also assignee of the present TRIPS Application.